



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,813	02/28/2002	Steven James Wojcik	KCX-450 (16960)	2378

7590 08/05/2003

Neal P. Pierotti
Dority & Manning, Attorneys at Law, P.A.
P.O. Box 1449
Greenville, SC 29602

EXAMINER

HAUGLAND, SCOTT J

ART UNIT	PAPER NUMBER
----------	--------------

3654

DATE MAILED: 08/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/085,813	WOJCIK ET AL.
Examiner	Art Unit	
Scott Haugland	3654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on ____.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-60 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-60 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. ____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) Other: _____

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the brake controlled mandrel recited in claim 3, line 2 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 5, 8, 13, 15-17, 20, 22, 24, 25, 28-31, 37, 38, 40, 46, 48, 51, 52, 56, 57, and 60 are rejected under 35 U.S.C. 102(b) as being anticipated by Morizzo (pat. no. 4,930,711).

Morizzo discloses a winder for winding a web to produce a rolled product comprising a web transport apparatus 36, 44, a plurality of independent winding modules 20, 20' located in a substantially linear arrangement that wind web by surface winding onto mandrels 22 driven by rollers 58, 62, positioning apparatus for moving the winding modules into engagement with the web (including motor 82 which positions frame 70 and rollers 58, 60, winding roller 58 connected to a vacuum source for holding the web against roller 58, and feed piston 68 which moves conveyor belt 38 upward. See col. 6, line 53-col. 7, line 5), core loading apparatus 52, 90, 92, 93, product stripping apparatus (cylinder 72, discharge plate 73, transport assembly 56), and waste removal means (col. 7, line 62- col. 8, line 13). The mandrel 22 is movably positioned so that the distance between the web transport and winding module varies. Web is attached to the core 22 by adhesion (col. 6, lines 13-19). The formed rolled product includes core 22, 122 (col. 6, lines 10-13). Morizzo discloses a method of producing rolled product in which only one independent winding module winds at any given time (col. 9, line 40 - col. 10, line 4).

With regard to claims 1, 31, 37, and 38, one winding module of Morizzo is capable of operating when another is shut down or disabled since the disclosed process of using the device involves winding with one module while another is not winding (col. 9, line 40 - col. 10, line 4). Further, the additional modules (beyond one) are not

required for operation, but are present to speed the winding process (col. 9, lines 25-28), so the winder is capable of winding with only one functioning module.

With regard to claim 4, the web is inherently wound by a combination of mandrel rotational speed, web surface speed, incoming web tension, and nip pressure.

With regard to claims 5, 13, and 40, the web transport apparatus is seen to be a vacuum conveyor since it uses vacuum plate 44 in the conveying process.

With regard to claims 16, 17, and 52, winding is inherently affected by controlling tension on the web and controlling torque of the winding modules.

With regard to claims 24 and 48, when three or more modules are present (col. 9, lines 25-28), the winding modules are in different planes as one fills while at least one other is idle or is being emptied by a discharge mechanism (col. 8, lines 58-62). In addition, the two winding modules shown in the drawings are in different vertical planes.

With regard to claims 25 and 57, the winding modules of Morizzo are seen to be configured for winding slit web since they are capable of winding plural parallel slit webs on a single core or coaxial cores.

With regard to claims 28 and 56, the winding modules of Morizzo are inherently capable of producing rolled product having different sheet counts by stopping the winding process at different points.

With regard to claim 60, all embodiments of the apparatus of Morizzo have at least a single module (the claim is open ended). Further, Morizzo discloses that additional winding modules are optional (col. 9, lines 25-28).

Claims 1, 25, and 34-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Little (pat. no. 1,648,990).

Little discloses a winder for winding a web to produce a rolled product comprising a web transport apparatus 12, independent winding modules each having a separate frame 13 individually movable on trolley wheels 14 and carrying windup rolls 19 that can be raised and lowered individually using hand wheels 23 (page 1, lines 47-52). The winding modules engage the web and wind it by surface winding. Two of the modules wind web at any given time (page 1, lines 30-40). Rolled product is transported from the winding module (page 1, line 101-page 2, line 5). With regard to claims 25 and 36, the winding modules are configured for winding a slit web and slit web is provided (page 1, lines 31-35).

Claims 1, 2, 4-6, 9, 10, 12-14, 21, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson et al (pat. no. 5,497,959).

Johnson et al discloses a winder for winding a web to produce a rolled product comprising a web transport apparatus 10, 12 (of which 12 is a vacuum conveyor - see col. 3, lines 55-59) and a plurality of independent winding modules 15, 16, 17, 18 and 15', 16', 17', 18' in a radial arrangement that wind by surface winding. The winding modules have vacuum mandrels 15, 15' for winding a coreless rolled product having a cylindrical cavity in the center (col. 1, lines 10-14, Figs. 2 and 3). With regard to claim 2, the mandrels 15, 15' are driven by winding drums 17, 18, 17', 18' (col. 4, lines 3-4).

Claim 60 is rejected under 35 U.S.C. 102(b) as being anticipated by Kammann (pat. no. 5,437,417).

Kammann discloses a winder for winding a web to produce a rolled product comprising a web transport 2, 5, and a single winding module capable of forming a rolled product by center winding, surface winding, or combinations.

Claims 1, 2, 18, 38, 44, 47, 57, 59, and 60 are rejected under 35 U.S.C. 102(b) as being anticipated by Billingsley (pat. no. 3,157,371).

Billingsley discloses a winder for winding a web to produce a rolled product comprising a web transport apparatus 14 and two independent winding modules (col. 4, lines 46-52) located in a radial arrangement having mandrels 17, 18, 19, 20 driven by motor M2 (Fig. 2; col. 3, lines 23-28). Cores 15, 16 on which web is wound are mounted on the mandrels and the web is attached to them by adhesion (col. 4, lines 30-31). The speed and distance between the mandrels and web transport apparatus is controlled (col. 3, lines 23-35 and 46-61). With regard to claim 60, the disclosed apparatus includes a single winding module (the claim is open ended). Alternatively, both winding turrets (having mandrels 17, 18, 19, 20) of Billingsley can be considered a single winding module.

Claims 31-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Billingsley (pat. no. 3,157,371).

Billingsley discloses a winder for winding a web to produce a rolled product comprising a web transport apparatus 14 and a plurality of independent winding modules (one having mandrel 18 and one having mandrel 20). Core 16 on which web is wound is mounted on one of the mandrels. Only one module (that having mandrel 18 or that having mandrel 20) winds at a time. The modules are independent since one can be inactive (e.g., for completed roll removal) while the other is active (col. 4, lines 37-52). With regard to claim 32, the web is a slit web (col. 1, lines 9-12). With regard to claim 33, loading of cores and accelerating the mandrels are inherent in the use of the disclosed apparatus.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 14, 45, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morizzo in view of Diltz (3,869,095).

Morizzo discloses a winder for winding a web to produce a rolled product comprising a web transport apparatus 36, 44, a plurality of independent winding

modules 20, 20' located in a substantially linear arrangement that wind web by surface winding onto a mandrel 22 driven by rollers 58, 62, positioning apparatus for moving the winding modules into engagement with the web (including motor 82 which positions frame 70 and rollers 58, 60, winding roller 58 connected to a vacuum source for holding the web against roller 58, and feed piston 68 which moves conveyor belt 38 upward. See col. 6, line 53-col 7., line 5), core loading apparatus 52, 90, 92, 93, product stripping apparatus (cylinder 72, discharge plate 73, transport assembly 56), and waste removal means (col. 7, line 62- col. 8, line 13). The mandrel 22 is movably positioned so that the distance between the transport and winding module varies. Web is attached to the core 22 by adhesion (col. 6, lines 13-19). The formed rolled product includes core 22, 122 (col. 6, lines 10-13). Morizzo discloses a method of producing rolled product in which only one independent winding module winds at any given time (col. 9, line 40 - col. 10, line 4).

Morizzo does not disclose a brake controlled mandrel, an air blast for redirecting web, a perforated core, or a vacuum supplied mandrel.

Diltz teaches making a winding mandrel brake controlled to decelerate a completed roll wound on the mandrel (col. 7, lines 17-29), teaches providing an air blast (col. 8, lines 26-33) for redirecting a leading end of a web to be wound onto a winding module, and teaches providing perforated cores 88 and vacuum supplied mandrels 40, 41 for attaching a leading end of web to be wound to the cores.

With regard to claim 8, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the winding modules of Morizzo

with brake controlled mandrels as taught by Diltz to decelerate a completed product roll.

With regard to claims 14 and 50, it would have been obvious to provide Morizzo with means providing an air blast to direct a leading end of a web to be wound onto a winding module as taught by Diltz to assist in attaching the leading end to the winding module. With regard to claim 45, it would have been further obvious to provide Morizzo with vacuum supplied mandrels and perforated cores as taught by Diltz to attach a leading end of web to be wound to the cores.

Claims 5, 6, 13, 40, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morizzo in view of Nistri et al (pat. no. 4,583,698).

Nistri et al teaches using a vacuum conveyor 9 and vacuum roll 8 to feed and facilitate threading of a web in a winder.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Morizzo with a vacuum conveyor or vacuum roll for feeding the web to the winding modules as taught by Nistri et al to maintain feeding engagement with the web and to facilitate threading through the winding apparatus.

Claims 7 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morizzo in view of Menz et al (doc. no. WO 98/52857).

Morizzo does not disclose a web transport apparatus that is an electrostatic belt.

Menz et al teaches using an electrostatic belt (in lieu of rollers 3, 4) to feed web material (page 6, third full paragraph. Also, note col. 3, lines 24-29 of corresponding US document pat. No. 6,264,132).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Morizzo with a web transport apparatus in the form of an electrostatic belt as taught by Menz et al to provide more positive gripping and feeding of the web.

Claims 11 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morizzo in view of Dowd (pat. no. 4,133,495).

Morizzo does not disclose a tail sealing apparatus.

Dowd teaches providing a web winding apparatus with a tail sealing apparatus to prevent unwinding of an outer end of a web from a finished roll.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Morizzo with a tail sealing apparatus as taught by Dowd to prevent unwinding of an outer end of the web from a completed product roll.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morizzo in view of Urban (pat. no. 4,988,052).

Morizzo does not disclose applying adhesive to the leading end and trailing end of web before it engages the winding modules.

Urban teaches applying adhesive to the leading end and trailing end of web 7 being wound before it engages winding modules 4, 5, 6.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply adhesive to the leading and trailing ends of the web of Morizzo before it engages winding modules as taught by Urban to attach the leading and trailing ends of web to cores in plural winding modules while requiring only a single adhesive applying station.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morizzo in view of Oliver et al (pat. no. 5,402,960).

Morizzo does not disclose that the rolled product produced by the winding modules is solid and coreless without a cavity.

Oliver et al teaches forming a rolled web of paper as a solid roll without a core to reduce packaging materials.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the winding device of Morizzo to form a rolled product that is solid and coreless without a cavity as taught by Oliver et al reduce the quantity of packaging materials required for the product.

Claims 26, 27, 32, 54, and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morizzo.

Morizzo does not disclose that the winding apparatus is located at the end of a tissue machine or a paper making machine or the step of providing slit web to be wound.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to locate winding apparatus of Morizzo at the end of a tissue machine or a paper making machine to wind the web produced thereby since the apparatus of Morizzo is clearly capable of winding tissue or other paper. It would have been further obvious to provide a slit web to be wound since the apparatus of Morizzo would clearly have been capable of winding slit web.

Claims 39, 53, 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morizzo in view of Billingsley (pat. no. 3,157,371).

Morizzo does not disclose an apparatus for loading cores onto the mandrel 22 or center and surface drives.

Billingsley teaches providing a web winder with driven mandrels 17, 18, 19, 20 and a surface contacting drive (drum) 14 driven at a speed differential to improve winding characteristics (col. 3, lines 23-35). Billingsley teaches providing a winder with means to load cores onto the mandrels (col. 4, lines 39-42).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the winding apparatus of Morizzo with a driven mandrel for receiving cores, drive means for controlling the speed differential between the mandrel drive (center drive) and the surface drive, and core loading means as taught by

Billingsley to provide Morizzo with center and surface drives to obtain increased control over the winding process and product quality.

Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morizzo in view of Johnson et al (pat. no. 5,497,959).

Morizzo does not disclose a vacuum mandrel.

Johnson et al teaches providing vacuum mandrels for winding coreless rolled products.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the winding apparatus of Morizzo with vacuum mandrels as taught by Johnson et al to allow it to form coreless rolled products.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al in view of Pretto et al (pat. no. 5,379,964).

Johnson et al discloses a winder for winding a web to produce a rolled product comprising a web transport apparatus 10, 12 (of which 12 is a vacuum conveyor - see col. 3, lines 55-59) and a plurality of independent winding modules 15, 16, 17, 18 and 15', 16', 17', 18' in a radial arrangement that wind by surface winding. The winding modules have vacuum mandrels 15, 15' for winding a coreless rolled product having a cylindrical cavity in the center (col. 1, lines 10-14, Figs. 2 and 3). The mandrels 15, 15' are driven by winding drums 17, 18, 17', 18' (col. 4, lines 3-4).

Johnson et al does not disclose that the mandrels are made of a carbon fiber composite.

Pretto et al teaches forming a web winding mandrel of a carbon fiber composite to provide a lightweight mandrel having high strength and stiffness.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the mandrels of Johnson et al of a carbon fiber composite as taught by Pretto et al to make them light weight with high strength and stiffness.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al in view of Urban (pat. no. 4,988,052).

Johnson et al does not disclose applying adhesive to the leading end and trailing end of web before it engages the winding modules.

Urban teaches applying adhesive to the leading end and trailing end of web 7 being wound before it engages winding modules 4,5,6.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply adhesive to the leading and trailing ends of the web of Johnson et al before it engages the winding modules as taught by Urban to attach the leading and trailing ends of the web to cores in plural winding modules while requiring only a single adhesive applying station.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al in view of Diltz (3,869,095).

Johnson et al does not disclose an air blast for redirecting web.

Diltz teaches providing an air blast (col. 8, lines 26-33) for redirecting a leading end of a web to be wound onto a winding module.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Johnson et al with means providing an air blast to direct a leading end of a web to be wound onto a winding module as taught by Diltz to assist in attaching the leading end to the winding module.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mayall is cited to show a center driven winder for slit web. McCarthy et al is cited to show a continuous web winding apparatus. Russell is cited to show a winder for combination center and surface winding. McDonald et al and Vigneau are cited to show winders for coreless rolls. Alfio and Fan are cited to show surface winders for web in which conveyor belts drive web receiving rolls. Summey, III and Fordham are cited to show a multi-mode winders. Menz et al (pat. no. 6,264,132) is the U.S. equivalent of doc. no. WO 98/52857.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Haugland whose telephone number is (703) 305-

Art Unit: 3654

6498. The examiner can normally be reached on Monday - Thursday and every second Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy Matecki can be reached on (703) 308-2688. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9326 for regular communications and (703) 872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

sjh
sjh
July 30, 2003

Kathy Matecki

KATHY MATECKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600